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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,973	09/05/2003	Tsutomu Tashiro	11-179	5676

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EXAMINER

PANG, ROGER L

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/654,973

Applicant(s)

TASHIRO, TSUTOMU

Examiner

Roger L Pang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-13, 15-17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9-5-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The following action is in response to the election filed for application 10/654,973 on December 7, 2004.

#### *Election/Restrictions*

Claim 18 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 7, 2004.

#### *Claim Objections*

Claim 11 is objected to because of the following informalities: on line 7, the word “hither” should be replaced with --higher--. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-8, 15, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to claim 7, on lines 5-6, the phrase “to raise the maximum torque than a maximum” is unclear. It appears that the word --higher-- should be inserted before “than.” With regard to claim 15, the transmitted-torque capacity lower limit is compared to a target engine torque, however, it is unclear how this is done, since both are different units of measurement. With regard to claim 19, the limitation of “the drive shaft” lacks antecedent basis. Also, it appears that the term should be --drive train--.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 16, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hubbard. With regard to claims 1 and 20, Hubbard teaches an apparatus for controlling a joint force of a friction-joint component C-1 placed in a torque transmitting mechanism mounted on a vehicle, the friction-joint component receives, as an input torque, a torque generated by a drive source 12 to output the inputted torque, as an outputted torque, from the torque transmitting mechanism, comprising: a guideline producing unit 112-128 configured to produce a first target operation guideline directed to the torque transmitting mechanism and a second target operation guideline 104/93 directed to the drive source, the first target operation guideline including information regulating a transmitted torque capacity TQcl of the torque transmitting mechanism (Col. 8); a joint force controlling unit 130 configured to control the joint force of the friction-joint component based on the first target operation guideline, the joint force controlling unit including a joint force setting unit configured to set a value to the joint force depending on the information regulating the transmitted torque capacity (Col. 8); and a drive force controlling unit 88 configured to control a drive force of the drive source based on the second target operation guideline, the drive force leading to the torque inputted to the friction-joint component. With regard to claim 16, Hubbard teaches the apparatus, wherein the second target operation guideline includes information indicative of a target value of engine torque 100, the information being

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given to the drive force controlling unit (Fig. 6A). With regard to claim 19, Hubbard teaches the apparatus, wherein the torque transmitting mechanism is a connected/disconnected type of transmission 10 arranged within a drive train.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, 9-11, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubbard as applied to claim 1 above, and further in view of Jamzadeh. With regard to claim 2, Hubbard teaches the apparatus wherein the information regulating the transmitted torque capacity is a transmitted-torque capacity of the torque transmitting mechanism, wherein the joint force setting unit is configured to set the value to the joint force so that the transmitted torque capacity is equal to or larger than the transmitted-torque capacity. Hubbard lacks the specific teaching of said capacity being the transmitted-torque capacity lower limit. Jamzadeh teaches a clutch C-1 controlled within a transmission to a torque capacity equal to or larger than the transmitted-torque capacity lower limit [T(PCREFMIN)] (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hubbard to employ the transmitted-torque capacity lower limit as the TC (torque capacity), in order to minimize heat generation within the clutch (Col. 1). With regard to claim 2, Hubbard teaches the apparatus wherein the information regulating the transmitted torque capacity is a transmitted-torque capacity of the torque transmitting mechanism, wherein the joint force setting unit is configured

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to set the value to the joint force so that the transmitted torque capacity is equal to or larger than the transmitted-torque capacity. Hubbard lacks the specific teaching of said capacity being the transmitted-torque capacity maximum value. Jamzadeh teaches a clutch C-1 controlled within a transmission to a torque capacity equal to or lesser than the transmitted-torque capacity maximum value  $[T(PCREFMAX)]$  (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hubbard to employ the transmitted-torque capacity maximum value as the TC (torque capacity), in order to minimize heat generation within the clutch (Col. 1). With regard to claim 9, Hubbard in view of *Jamzadeh* teach the apparatus, wherein the guideline producing unit has a unit configured to produce the transmitted torque capacity  $TQ_{cl}$  given to the torque transmitting mechanism in accordance with a torque applied (*Fig. 14D*) via the inputted torque to the torque transmitting mechanism and an operated condition of the torque transmitting mechanism and a unit configured to finally designate, as the transmitted torque capacity, either one which is larger than the other between the transmitted torque capacity given to the torque transmitting mechanism and the transmitted-torque capacity lower limit  $[T(PREFMIN)]$ . With regard to claim 10, Jamzadeh teaches the apparatus, further comprising a unit configured to estimate a joint condition of the friction-joint component, wherein the transmitted-torque capacity producing unit is configured, when the estimation unit estimates that the joint condition of the friction-joint unit is improper, to raise the transmitted torque capacity given to the torque transmitting mechanism (*Fig. 12*). With regard to claim 11, Jamzadeh teaches the apparatus, wherein the estimation unit is configured to determine that the joint condition of the friction-joint component is improper in cases where a difference between a rotation speed attributable to the inputted torque from the drive source to the friction-joint

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component and a further rotation speed attributable to the output torque from the friction-joint component to the drive shaft is higher than a predetermined value (Fig. 8). With regard to claim 13, Jamzadeh teaches the apparatus, further comprising a unit configured to detect a malfunction of the torque transmitting mechanism wherein the transmitted-torque capacity producing unit is configured, when the detection unit detects the malfunction of the torque transmitting mechanism, to change the first target operation guideline so that the transmitted torque capacity given to the torque transmitting mechanism is raised (Fig. 12). With regard to claim 17, see rejection of claims 2 and 3.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hubbard in view of Jamzadeh as applied to claim 9 above, and further in view of Oba. Hubbard and Jamzadeh teach the apparatus, but lack the teaching of estimating a temperature of the torque transmitting mechanism and raising the torque capacity when a high temperature is detected. Hubbard teaches a unit configured to estimate 1 an operating temperature of the torque transmitting mechanism wherein the transmitted-torque capacity producing unit is configured, when the estimation unit estimates that the operating temperature ToL is outside a predetermined temperature range  $\alpha$  that gives a proper operating condition to the torque transmitting mechanism, to raise the transmitted torque capacity given to the torque transmitting mechanism

3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hubbard in view of Jamzadeh to employ a higher torque capacity when a high temperature is detected in further view of Oba in order to avoid shift shock (Col. 2).

***Allowable Subject Matter***

Claims 4-6, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Folkerts, Wheeler, Kanno, Yamaguchi, Ochi, and Tezuka have been cited to show similar torque transmitting controls.

**FACSIMILE TRANSMISSION**

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (703) 305-3597. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses



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If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger L Pang whose telephone number is 703-305-0445 (517-272-7095 post move to Alexandria). The examiner can normally be reached on 5:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roger L Pang  
Patent Examiner  
Art Unit 3681

February 4, 2005